

WHAT IS CLAIMED IS:

1. A process for purifying bisphenol-A comprising the steps of
 - a) cooling a liquid mixture comprising bisphenol-A and water in a bisphenol-A crystallizer to form bisphenol-A crystals in a liquid phase;
 - 5 b) separating the bisphenol-A crystals from the liquid phase;
 - c) dividing at least a portion of the liquid phase into a bisphenol-rich organic phase and a water-rich phase;
 - d) feeding phenol and at least a portion of the bisphenol-rich organic phase into an adduct crystallizer to form a crystalline adduct of phenol and bisphenol-A in a mother
10 liquor; and
 - e) separating the crystalline adduct from the mother liquor.
2. The process of Claim 1 wherein at least a portion of the mother liquor obtained in step e) is recycled to step d).
3. The process of Claim 2 wherein the mother liquor is subjected to a
15 distillation step to remove water before the mother is recycled to step d).
4. The process of Claim 1 comprising the additional steps of
 - f) subjecting at least a portion of the mother liquor obtained in step e) to a distillation step to remove water;
 - g) contacting mother liquor from which water has been removed with a catalyst for
20 isomerizing isomers of bisphenol-A to bisphenol-A; and
 - h) recycling at least a portion of the mother liquor treated in step g) to step d).
5. The process of Claim 1 comprising the additional steps of
 - g) contacting at least a portion of the mother liquor obtained in step e) with a catalyst for isomerizing isomers of bisphenol-A to bisphenol-A; and

h) recycling at least a portion of the mother liquor treated in step g) to step d).

6. The process of Claim 1 wherein the crystalline adduct obtained in step e) is washed with phenol.

7. The process of Claim 6 wherein at least a portion of the phenol that has been
5 used for washing the crystalline adduct is recycled to step d).

8. The process of Claim 7 wherein at least a portion of the phenol that has been used for washing the crystalline adduct is first subjected to a distillation step to remove water and then recycled to step d).

9. The process of Claim 6 wherein at least a portion of the phenol that has been
10 used for washing the crystalline adduct and at least a portion of the mother liquor obtained in step e) are combined to a recycle liquor and recycled to step d).

10. The process of Claim 9 wherein the recycle liquor is subjected to a distillation step to remove water before the recycle liquor is recycled to step d).

11. The process of Claim 10 wherein after the distillation step the recycle liquor
15 is contacted with a catalyst for isomerizing isomers of bisphenol-A to bisphenol-A before the recycle liquor is recycled to step d).

12. The process of claim 4, 5 or 11 wherein the catalyst for isomerizing isomers of bisphenol-A to bisphenol-A is a cation exchange resin in acid form.

13. The process of any one of Claims 1 to 12 wherein the bisphenol-A crystals
20 which have been separated from the liquid phase in step b) are melted, mixed with water, cooled in a second bisphenol-A crystallizer to form bisphenol-A crystals in a liquid phase and the crystals are separated from the liquid phase.

14. The process of any one of Claims 1 to 13 wherein crystalline adduct obtained
in step d) is subjected to a distillation step to distill off phenol and the resulting bisphenol-A
25 is recycled to step a).